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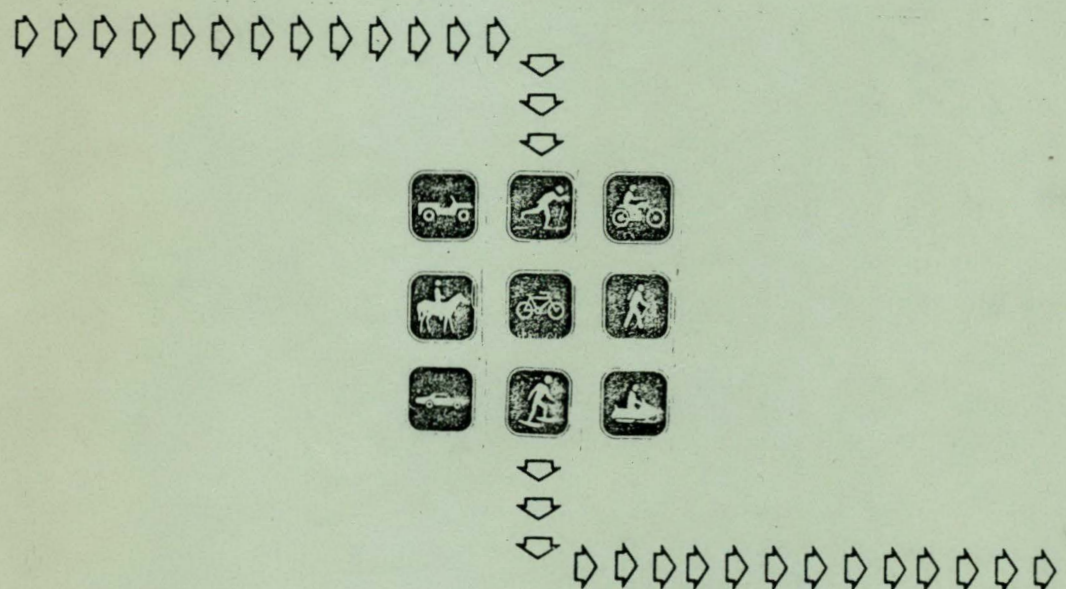
Natural Opportunities for Recreation Movement



James W. Gregg
Dillon Ranger District
Arapaho National Forest
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TABLE OF CONTENTS

Page

List of Figures i

Chapter One -- Introduction 1

City Park Analogy 1
Recreation Opportunity Spectrum 2
Dispersed Recreation Management in the National Forest ... 3
Study Limitations 4
Assumptions 4

Chapter Two -- Review of Literature 5

Recreation Carrying Capacity 5
Acceptable levels of change 5
Regional Acceptable Work Standards for Dispersed Recreation Management 6
Computer Systems 6
Wilderness Research 7
Control Methods 7

Chapter Three -- Procedures 9

Overall Development Guidelines 9
The Project Area 9
Past Management 10
The Trails Plan 10
Summit County Trailhead Guide 11
Use Signing 11
Providing Amenities 12
User Information 14
Rainbow Demonstration Project 14
Monitoring Methods 14

Applied Techniques on Rainbow Demonstration Project 15

Chapter Four -- Analysis of Results and Discussions 19

Rainbow Demonstration Project Analysis 19
Overall Findings 22

Chapter Five -- Summary and Conclusions 29

Bibliography

APPENDICES

A -- Typical Recreation Opportunity Guide used on the Dillon Ranger District.

B -- Observation Diary form

C -- Winter TrailHead Guide

D -- Plasticized paper suggested use signs used on the Dillon Ranger District.

E -- News media articles on the NORM Concept.

F -- Master map base for use in future NORM evaluation maping.

FIGURES

Figure 1 ---------- Recreation Opportunity Spectrum

Figure 2 ---------- Installing International Symbol signs

Figure 3 ---------- Historic brick kiln used to attract people to this area

Figure 4 ---------- Temporary shelters on ski touring trail

Figure 5 ---------- Map dated 2/1/81, showing Rainbow Demonstration project conflicts before applying natural techniques

Figure 6 ---------- Map dated 2/1/82, showing Rainbow Demonstration project conflicts after applying natural techniques

Figure 7 ---------- Suggested use signs and side hill construction used to separate uses

Figure 8 ---------- Suggested use "summer" signs which also need suggested use "winter" signs

Figure 9 ---------- Both signs are within sight of one another at the "point of decision"

Figure 10 ---------- Suggested use sign used on the Dillon Ranger District

Figure 11 ---------- Snowmobiles and skiers in an area suggested for both uses

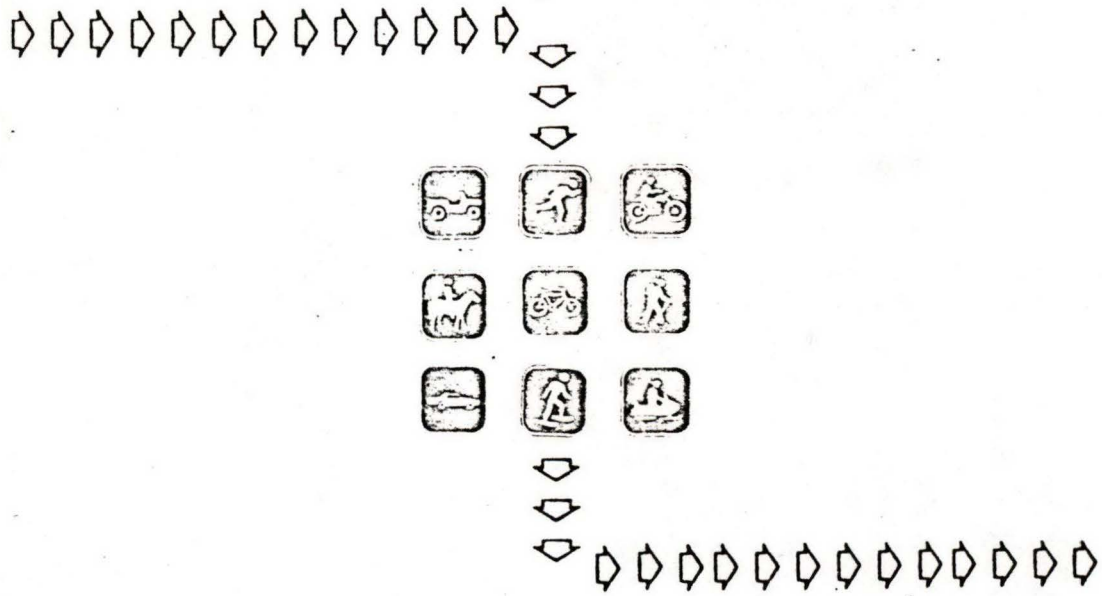
Figure 12 ---------- Stained rough sawn four-by-four post to display symbol signs

Figure 13 ---------- Stapling suggested use signs on an existing sign

ABSTRACT

Natural Opportunities for Recreation Movement (NORM) is a management concept which uses subtle or light-handed techniques as an aid to manage dispersed recreation use. Inconsistencies in the recreation opportunity setting as related to either the natural resource or the social setting can be addressed through the use of this concept. NORM uses low cost, simple, and innovative methods as a viable alternative to achieving an acceptable level of land management.

Natural Opportunities for Recreation Movement



1

CHAPTER 1

Natural techniques of recreation management may be one of the most important tools for the manager in the 1980's. Just as the American public has turned to everything from natural foods to natural heating, so should the land manager be aware of natural ways to achieve desired goals in the recreation field.

The word "natural" is thought of as designed or produced by nature rather than man, not artificial. In a forest setting, alterations or techniques which appear as natural may be in actuality subtle management tools.

These techniques need to be better developed and understood if today's forest land manager is going to keep afloat under the pressures of budget cuts, overuse, and other limitations.

A good catch word to use for the concept of natural management is NORM, which stands for Natural Opportunity for Recreation Movement.

The word "norm" is defined in the dictionary as an abbreviation for normal, which is "functioning or occurring in a natural way". (Morris Ed. 1975)

This paper will explore the techniques of NORM and explain how it can be used in everyday management situations on our national forests.

The City Park Analogy

An analogy of what NORM is all about can be seen by taking a look at our city parks.

City parks and playgrounds have been around for a long time and serve many thousands of recreation users from all walks of life. Most city parks have an area developed for softball as well as a general playing field for soccer or football. Tennis courts, horseshoe pits, volleyball areas, and picnic areas all commonly occur in our town park situation. Those interested in pursuing softball filter over to the softball diamond; those playing soccer go to the soccer field. The reason for this distribution is obvious; the facility available is best suited for the activity which is taking place. The result is a satisfactory recreation experience, with people enjoying their preferred activity without conflict.

The public user in the city park easily identifies the facility best suited for his or her activity. The baseball diamond, the tennis court, the horseshoe pit are all physical features the American public has been brought up with.

The typical forest visitor does not see his facility or niche in the national forest like he does in the city park; the four wheel drive area, the backpacking area and the skiing or snowmobiling area may all look

similar to the forest visitor. The delicate high alpine tundra, the marshy wetlands and the rough bedrock trail may all appear as "Gods Country" to the average visitor. The physical "facilities" of the forest environment are not readily identified as in the city park back home. The result many times becomes the wrong use in the wrong area at the wrong time.

Complications occur both in forest lands and city parks when use levels exceed capacity. Reservation systems, restricted use and structured usage are techniques which may eventually have to be applied. These authoritarian controls are not always well accepted or easy to administer, especially today when more government regulations, red tape, and bureaucratic controls are the last thing people want. Can anything be done prior to going this route, especially in outdoor recreation management? A technique is needed that can allow forest users to distribute themselves naturally to the areas best suited for their activity just as they have learned in our city park analogy.

The Recreation Opportunity Spectrum

"Managing for recreation requires different kinds of data and management concepts than do most other activities" (Federal Register 1979). Since the late 1970's the Recreation Opportunity Spectrum (ROS) has been fine tuned to provide an ideal framework for defining the types of outdoor recreation opportunities the public might desire and for identifying the portions of the spectrum a given land area such as a National Forest might be able to provide.

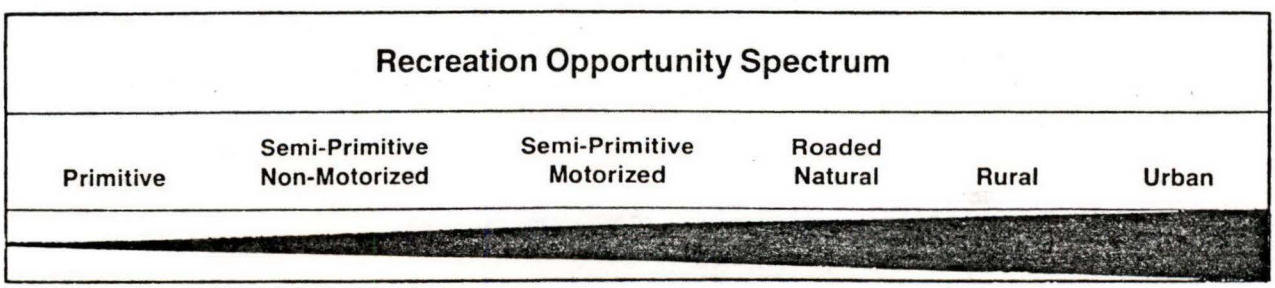


Figure 1

These six classes of recreation opportunities are made up of three principle components: the activities the recreationists seek, the settings provided, and the experiences derived. "By managing the natural resource settings and the activities which occur within it, the

manager is providing the opportunities for recreation experiences to take place". (ROS Users Guide 1981)

In identifying the ROS on particular areas of land, the physical, social and managerial settings are delineated. "Setting inconsistency" is obviously occurring especially on heavier used, higher value lands. A heavily used hiking trail in a primitive class physical setting may register a semi-primitive or roaded natural class social setting, for example, due to the amount of use (ROS User Guide 1981). Management prescriptions normally will identify the direction which the manager should go in the case of inconsistencies. This paper will investigate methods of implementation to correct the inconsistency and/or to maintain the desired existing setting. Although natural techniques for recreation management might be applied to all classes of the Recreation Opportunity Spectrum, this paper will concentrate on dispersed management (as opposed to "developed sites"). The reason for this is that future impact on forest lands is anticipated to be on the non-developed portions of forest lands. There is a drastic need to provide some semblance of management to this largest area of the National Forest System.

Demands for activities associated with forest and range land classes in the ROS of primitive and semi-primitive are expected to increase by 60 to 100 percent by the year 2030. The 1979 Resource Planning Act Assessment shows that by 2030 the demand for cross-country skiing, for example, can increase by 180 percent. (Alternative Goals, 1985, Resources Planning Act Program 1981)

Dispersed Recreation in the National Forest

General guidelines for dispersed recreation management for national forests can be found in Chapter 2350 General Forest Environmental Areas of the Forest Service Manual. The Manual states "where use occurs which either adversely affects national forest resources or poses public health, welfare and safety problems, or use conflicts occur, user regulation or control will be provided along with the facilities necessary to protect environment, resource, or human values". (Forest Service Manual 1980)

That's saying a lot considering the overall budget for dispersed recreation management has been reduced for 1982. Current national forest emphasis is being placed in existing developed type facilities which will provide a dollar return on the investment. (Forest Service memo 1981). At the same time managers see the deterioration of the undeveloped areas to the point that adverse effects are the result.

For clarity, we will use the folllwing key components as overall objectives for dispersed recreation management:

a. Provide enjoyment (user satisfaction)
b. Minimize adverse effects on natural resources, capital investments, private property.

c. Promote public safety (including risk identification, but not elimination).
d. Minimize conflicts among various users of the National Forest System (Forest Service 1980).

Basic assumptions relative to dispersed recreation management:

1. Use in undeveloped recreation will continue to increase, especially next to major metropolitan areas.
2. Adverse effects will occur unless some type of management effort is made. A general guideline will be to allow no further deterioration of natural resources and to provide opportunities for social separation of uses.
3. The recreationist desires to go to areas best suited for the type of activity he is interested in.
4. The recreationist desires a satisfactory experience without conflict, either with the environment or with other users.
5. The dispersed recreationist would like to escape regimentation, developed facilities and authoritarian control, but recognizes the need for, and will accept, some type of management program. (Stankey 1980)

Direction for off-road vehicle management in the Forest Service Manual states that areas are either open, closed or restricted. A Region Two supplement encourages user self-regulation, but provides little direction as to how to accomplish this (Forest Service 1980).

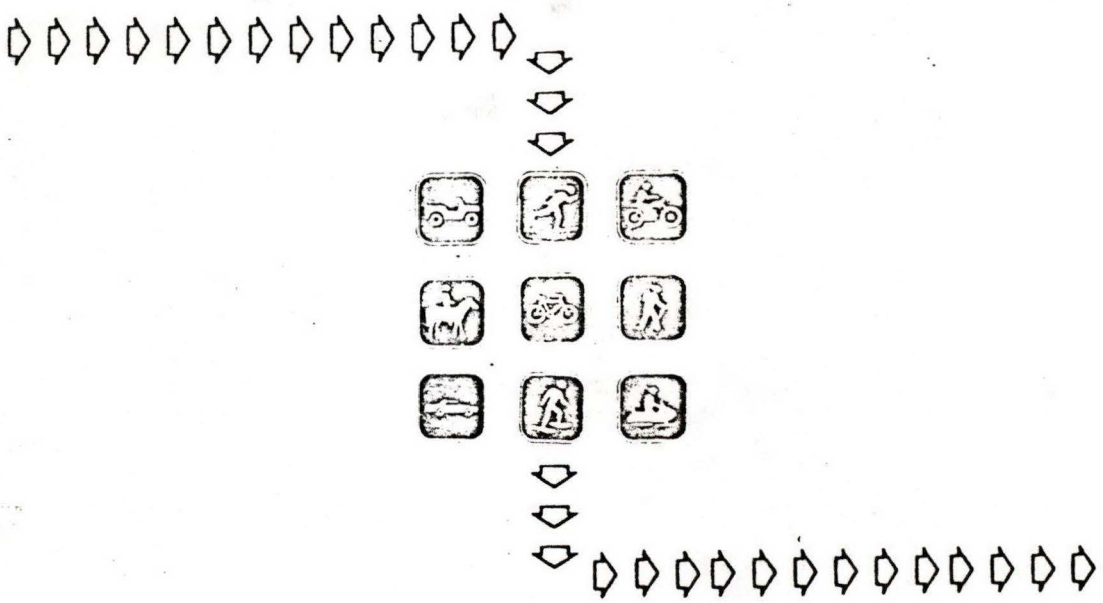
Emphasis is needed on a system which is user self-regulated to achieve the objectives for dispersed recreation management. These objectives for dispersed management should be thought of as an integral part of the undeveloped portions of the Recreation Opportunity Spectrum.

Study Limitations

Establishing the success or failure of the NORM system may be as difficult as establishing actual use data and recording resource damage. It is felt, however, that if the NORM concept is sound, it can be a realistic method of achieving the desired goals under the practical limitations of today's management. It will be difficult to measure the effectiveness of a style of management which has the goal of appearing like no management. This paper will explore a management planning concept rather than provide a statistical analysis of success or failure.

This report will not dwell on what constitutes conflict or adverse effect, but basically will assume most readers will identify with the problems being described. Snowmobile and cross-country skiers, motor bikes and four wheel drives, hikers and motor bikes, horses and hikers all have impacts on the natural resource as well as social impacts on each other.

Natural Opportunities for Recreation Movement



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CHAPTER II

The NORM concept of recreation management involves designing and managing with nature (or the natural forest setting) and not against it. A literature review on related recreation management principles will help surface some basic principles to understand NORM.

Recreation Carrying Capacity

Recreation carrying capacity, especially in wilderness, has received the attention of social scientists for over a decade. In the study of carrying capacity, the researchers have concluded that no single number exists, but rather combinations of factors. These factors include management objectives, the physical and biological nature of the resource, and the preferences and tolerances of the users, all of which must be considered together in selecting a capacity for a given area. Heberlein has differentiated capacity into four related categories, physical, ecological, facility, and social, which may be used in roughly a descending order to establish capacities.

Heberlein points out that management objectives must be very specific to be effective. Objectives must define specifically what type of recreational experience is to be provided, and for whom it is to be provided. Management objectives such as "protect the resource" and "provide satisfying experiences" are not specific enough to help determine carrying capacity. (Heberlein 1977) In applying the principles of Natural Opportunities for Recreation Movement, orientation to a specific management objective is very important. In further understanding carrying capacity, one must ask "How much change do we allow?"

Acceptable Levels of Change

Increased unrestricted recreational use has already destroyed the integrity of natural plant communities in many areas where management objectives call for preservation and protection. Anticipated increases in use threaten to accelerate this destruction unless managers can effectively resolve the conflict between use and preservation.

Impacts resulting from this conflict are inevitable because even light use produces some ecological change. The basic problem, then, is to define the "limits of acceptable change", the maximum amount of deviation from pristine conditions consistent with the management objectives for the affected area. (Cole 1979)

In a talk to Clemson University Forest Service Short Course participants, Glen Haas, Recreation Researcher, stated that acceptable levels of change must be developed or we will be in court defending bootstrap management. Natural resource and social factors must be quantified and

specialists must respond to define change in the environment. Agreeing on acceptable levels of change, natural resource or social, will aid the manager in arriving at a theoretical carrying capacity. NORM is then needed as the tool to achieve a desired capacity. Frissell and others show that above relatively low threshold values, amount of use is not highly correlated with amount of ecologic change. Most change on a recreational site results from initial light use and continued or increased use results in little additional change. This suggests that site impact could be more effectively managed by facility location and design than by regulations on the amount of use and that ecologic change could be minimized by concentrating use on particularly resistant sites rather than dispersing use. Furthermore, because recovery rates can be many times slower than deterioration rates, most closure and rest-rotation schemes to allow site rehabilitation seem merely to increase the area of alteration without significantly reducing the intensity of alteration. (Cole 1979)

This points out the importance of design and facility location to achieve desired carrying capacity. This is an important basic premise in analysing natural methods of distributing recreation activities.

Regional Acceptable Work Standards for Dispersed Recreation Management

Region Two of the Forest Service has formulated acceptable work standards for dispersed recreation management. (Forest Service 1981)

The standards define or describe the way an activity will be done in an effort to provide uniformity in work performance and in on-the-ground results that work. Budget and management direction determine whether or not the activity should or should not be done. The guidelines do not relate to the Recreation Opportunity Spectrum, but do provide general direction for an on-the-ground stewardship level of management. Natural techniques are needed to meet this stewardship level through routine management actions and anticipated average funding allocations.

Computer Systems

The computer systems of today are an exciting new tool to aid in recreation planning. Projection models can let the manager computer test a new proposal or policy which might be under consideration (for example, limiting use at the most popular trailheads to some level, letting use increase by some amount, building a new road, or any one of hundreds of other real possibilities). This works well with sufficient background data, actual use information and computer time, most of which, unfortunately, today's field manager doesn't always have.

In a talk entitled "Wilderness - How to Manage, Not to Manage" W. J. Lucas, former Region Two Regional Forester, stated "Until you have been on the land in question, watched over it for years, and witnessed and recorded the subtle changes that take place there, I

do not believe you can decide what type of management is best for that land. You don't get the answer in a one year study." (Lucas 1971)

Computers can be an aid, but they are not the total answer. Needed are simple, easy to apply techniques which a field manager can daily incorporate into his routine to ultimately reach long range goals.

Wilderness Research

"Ecological research on classified wilderness topics run the gamut from the impact of visitors and their horses on plants, soil, water and animals - mainly on campsites and along trails - to the processes of ecological change affecting an entire wilderness". (Lucas 1974)

Through the 1970's, RARE II and wilderness classification bills spelled out what portions of forest lands will be managed as wilderness. Wilderness, being addressed by the 1964 Act itself and the numerous interpretations by Congress in the setting up of new wilderness and wilderness boundary adjustments, basically has a fairly clear (although not totally clear) definition. Researchers and managers have followed suit by literally studying and analysing all aspects of wilderness management. Many of the principles used in wilderness can be extended to apply to undeveloped or unclassified forest lands.

More refinement is needed in the Recreation Opportunity Spectrum as applied to these undeveloped forest lands outside of wilderness. Lucas emphasizes this point by saying "this area is a big, tough problem, with few easy handles. It would require a multi-disciplinary team of ecologists, economists and other social scientists to tackle it productively, and they would need a good deal of time for in-depth studies. Final, last-word answers probably could never be produced, but the decisions could certainly be assisted by organized, relevant knowledge." (Lucas 1974)

Lucas, in his paper Use Patterns and Visitor Characteristics, Attitudes and Performance in Nine Wilderness and Other Roadless Areas, concludes that many of the wilderness use problems could be alleviated if "a more diverse set of roadless recreation settings, with distinctions clearly explained and publicized, could help more people find experience opportunities closer to their preferences, thus better serving the American people." Through his study there was a definite pattern pointing to a need for dispersed recreation management outside of wilderness. Here the goal would emphasize recreation, not perpetuation of natural unmodified ecosystems. (Lucas 1980) NORM techniques are needed to implement this needed emphasis.

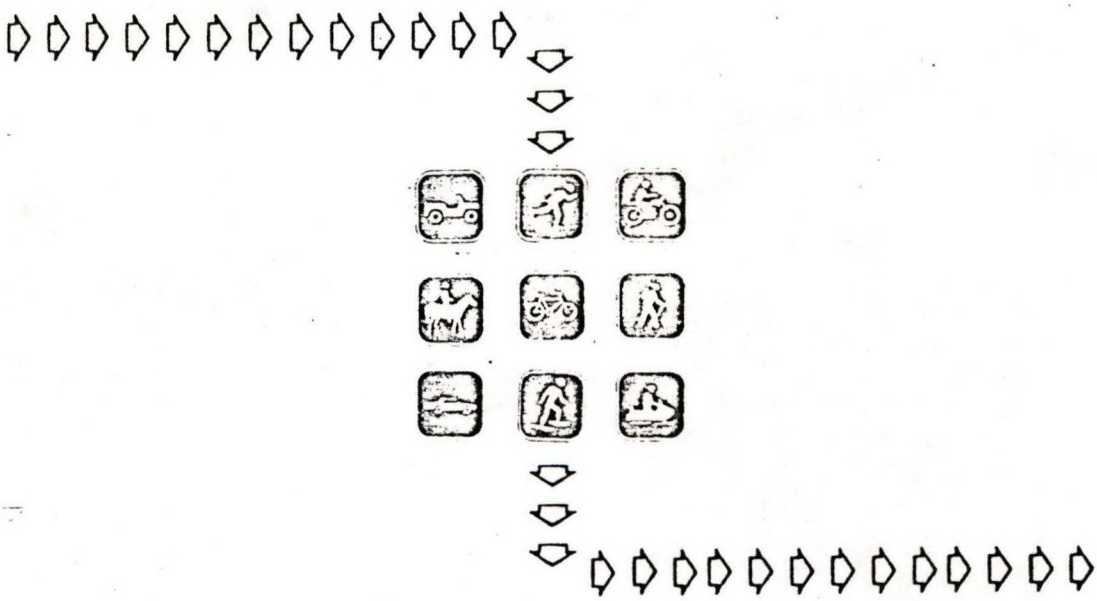
Control Methods

Wilderness managers have discovered that ecological and social impacts can be regulated by implementing one or more of five basic rationing systems: reservations, fees, queueing, lottery, or merit. "Managers must consider the effect on user groups, administrative experience

with the rationing system, acceptability to users, difficulty of administration, efficiency, principal ways impacts are controlled, and effect on user behavior." (Stankey, Boden 1977) Relative to the application of natural methods to distribute use, Stankey and Boden state that managers should strive to control environmental and social impacts, not merely visitor numbers, with a minimum of regimentation. They emphasize that one should ration only when less restrictive measures fail. (Stankey and Boden 1977)

Stankey reiterates in A Comparison of Carrying Capacities Perceptions Among Visitors to Two Wildernesses that the principle of "minimum regimentation" should guide management action. Judiciously applying only the minimum level of regulation needed to accomplish an objective will almost certainly gain visitor support. (Stankey 1980) Natural opportunities need to be identified and used to achieve this level of regulation.

Natural Opportunities for Recreation Movement



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CHAPTER III

Understanding some of the basic concepts brought out in the literature review is beneficial in addressing natural methods to achieve desired recreation use patterns.

Natural methods are sometimes so subtle managers who have been applying them don't really recognize them as such. This report will analyze some techniques and procedures which have been used and modified in 1979 and 80. A specific demonstration project established in the fall of 1981, will be reveiwed in detail to further analyze the application of Natural Opportunities for Recreation Movement.

Overall Development Guidelines

For additional guidance in developing the NORM concept, criteria similar to that used in the development of the Recreation Opportunity Spectrum will be used. The following criteria will help evaluate the soundness of the concept.

1. Provides for the balanced consideration of the overall undeveloped outdoor recreation resource.

2. Provides a sustained yield of outdoor recreation opportunities without impairment of long term productivity of the land.

3. Provides a system which protects and/or enhances the quality and quantity of the undeveloped outdoor recreation resource.

4. Provides a service-wide systematic approach to management of undeveloped recreation resource on National Forest lands which the public can understand and participate in.

5. Provides for an undeveloped outdoor recreation management system this is quickly responsive to changing conditions of the land and the desires of the using public.

6. Provides for an easy to understand economical and realistic method which will appeal to managers and users alike.

The Project Area

Our demonstration study will center around dispersed recreation management being applied on the Dillon Ranger District, Arapaho National Forest (administered by the White River National Forest) located 70 miles west of Denver in the heart of the Colorado Rockies. The area is easily accessed by Interstate 70 and basically serves as Denver's year-round playground. The District is in the top ten in the nation in total recreation visitor days. It has four major ski resorts, a portion of the Eagles Nest Wilderness area and 300,000 acres of dispersed management lands. The average elevation of the area is over 9,000 feet, which

makes for long winters. Resource impacts on the fragile ecosystems of this high country are considerable during all seasons.

Numerous individual projects have been initiated on the Dillon District and on nearby districts to provide some type of dispersed recreation management. Natural subtle management systems became the overall driving force in the beginning stages.

Past Management

During the mid-1970's, the influx of recreation use frustrated and overwhelmed district management. With no national emphasis or direction except in wilderness areas, developed site campgrounds, and developed ski areas, little in the way of management was done on the 300,000 acres of dispersed area at Dillon. Public pressures demanded winter trails, trails with separate uses, four-wheel drive roads to be kept open, and undeveloped use to be better managed. In a crisis response, winter trail signs were set up, road closures which couldn't be administered were dropped, and a draft wilderness plan was written which emphasized alternative backcountry use areas. Most of these efforts were in a direct response to public pressure and did not have an overall scheme or direction toward proper land management. Limits of acceptable change were, and still are, those seen in the professional judgement of the District manager. The process and actions taken did, however, open the door for a more rational pattern to follow.

The Trail Plan

The Dillon District is one hundred percent within Summit County. Over 75% of the county is National Forest land. In 1978, the Summit County Commissioners and the Forest Service signed a conceptual plan identifying recreation user needs through a transportation system which interconnected the communities and the National Forest lands throughout the county. (Hum, Dye 1978) Certain areas were identified in this plan as best suited for certain types of use. Public involvement sessions were held and the concept of 'use separation' was discussed at great length. The motorized/non-motorized issue, always a major topic, was identified as a key concern.

Identifying drainages or areas for various types of use was cautiously suggested. Both sides (motorized/non-motorized) feared that this would lead to legal restrictions on their public land. The forest manager also feared more legal clsoures which couldn't be enforced. Although leary of the concept at first, it was decided that areas such as drainages could be identified as to their best use. There was not much else that could be tried. The possibility that this would lead to legal closures would be risked as most everybody realized it couldn't be effective or enforced.

The public also pointed out that more regimentation or legal controls were definitely not desirable. Nobody wanted areas closed to their use.

The Forest Service indirectly took on the task of more specific user/area identification using the Trail Plan as a guideline. Unfortunately, the benefits of clear policy direction, the Recreation Opportunity Spectrum, work standards for dispersed recreation, and limits of acceptable change were not available to provide needed guidance. The following steps were initiated in hopes of gaining some acceptance.

Summit County Trailhead Guide

This instrument is a current listing and identification of recreation opportunities on the District. It is published twice a year: At the beginning of the summer and winter use seasons. The listing identifies areas for different types of uses. Care was taken not to produce a trail guide, but a guide to get the people to the trailhead or road which might provide the recreation experience they were looking for.

Use Signing

In response to public pressures for winter trails the District installed international symbol signs at trailheads showing either a skier or a snowmobiler, or both. This signing corresponded with the trailhead guide as assurance that this was in fact an area set up for a certain type of use.

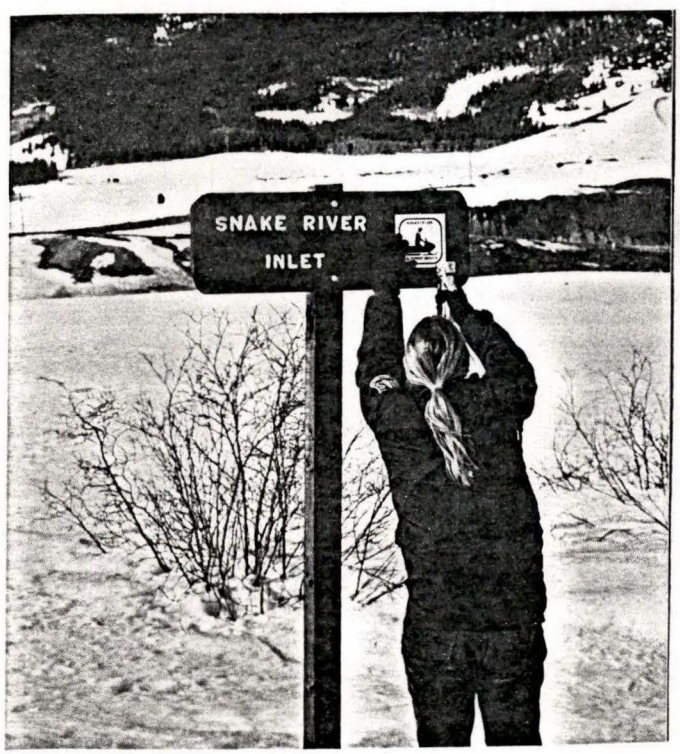


Figure 2. Installing international symbol signs.

Providing Amenities

In wilderness, despite its predominant use as a recreation area, management must be governed by the mandate that emphasizes the maintenance of ecological processes. In dispersed areas other than wilderness, however, the manager can offer special amenities or drawing cards to entice the user into a certain area. Recreational opportunities can be created or enhanced: For example, fishing opportunities could be enhanced through programs such as intensively stocking fish (questionable in wilderness where unmodified natural processes are the main objective) or even the construction of small earth dams to create impoundments. (Stankey 1976)

Vegetation might be modified to provide better vistas from an otherwise monotonous trail or four wheel drive road. Additional clearing might be done to provide a downhill cross-country skiing opportunity.

On the Holy Cross District of the White River National Forest, an interpretive sign and well marked cross-country trail was established in one drainage to draw users away from a nearby drainage which had wintering elk and private land conflicts. Historical features can be used as a drawing card to transfer use.

Figure 3. Historic brick kiln used to attract people to this area.

On the Leadville District of the Pike-San Isabel National Forest, temporary shelters with portable toilets were used to provide amenities to a marked cross-country touring area.

Figure 4. Temporary shelter on ski touring trail.

Picnic sites with rustic tables, cabins, or huts are other possibilities to draw users into an area which may otherwise not be as attractive.

Parking lots, especially in winter, are excellent amenities to draw use into a desired area. By not plowing, use can be readily transferred from one area to another. The risk of receiving a violation notice if not parked in a designated area helps enforce the technique!

Obviously, people are not always going to go where managers want them to go. The wide open valley with great views and spectacular mountain peaks is ideal for ski touring. The manager, however, knows the wide openness is caused by major avalanche activity, thus would like to transfer users to the nearby forested drainage which is less hazardous. An amenity such as a well marked and rated trail in the safer zone can draw users, especially on high hazard snowy days when the open valley is more exposed to wind and thus less attractive.

User Information

Undoubtedly, user information is one of the most valuable tools to create user sensitivity and awareness to land management conflicts. This works best when combined with field or on-the-ground efforts. Unfortunately, dollars and targets for a strong information program is lacking in most national forests. The Recreation Opportunity Guide (ROG) is an excellent tool to aid in achieving proper use distribution. ROG information book was established in 1979 on the Dillon Ranger District. (See Appendix A - sample ROG)

RAINBOW DEMONSTRATION PROJECT

In the fall of 1981, the Rainbow Study Area was set up as a demonstration project to observe and show the effectiveness of the various concepts and ideas which had been attempted throughout the District between 1978 and 1980.

If all the ideas for Natural Opportunities of Recreation Movement could be used on this so-called demonstration project, perhaps a better evaluation could be made as to the effectiveness of the program.

The Rainbow Lake area is a heavily used recreation zone, close to the district administrative office, which seems to have a little bit of all the problems of dispersed management. During the summer, uses include trail biking (primarily local), dayhiking, four-wheel driving, camping, bicycling and fishing. The semi-primitive motorized setting includes wet boggy areas, steep timbered mountain sides, rocky cliffs, historic mining ruins, and a small lake, all immediately adjacent to the resort town of Frisco, Colorado. During the winter months, activities include primarily cross-country skiing and snowmobiling. Sledding, walking, ski jumping, and ski racing (track skiing) are minor activities. In some areas, avalanche potential exists during winter months. The area had deteriorated under user impacts and was in need of some type of management action. Further change to the natural environment would be undesirable. The social environment needs opportunity for user separation. The Rainbow area was one of those problem zones which the land manager fears to go near!

Monitoring Methods - Ideally to monitor the Rainbow Demonstration Project round the clock, observation from a nearby mountain top would be the answer. Second best would be a series of road and trail counters and registration boxes to monitor use and seek comments. This would involve considerable expense and may yield little as far as actual results. A large share of the users are local day users who would not use registration boxes. Counters would not register activity type. Random site visits, at least once per month, however, can reveal necessary information as to the effect on the natural resource or social setting resulting from the efforts attempted.

In monitoring, sign vandalism, evidence of tracks, and resource condition all give clues as to the acceptance of the program. The monitoring will be documented by use of the Observation Diary and through the use of mapping.

Observation Diary - This is an informal method of documenting both field observations and responses from the Visitor Center or media. The form is simple to fill out and can be done by trail crews, back country guards, visitor center people, or the manager. Office of Management and Budget approval is not needed as it is not a formal interview, but merely a method of documenting discussions and observations. (See Appendix B - sample Observation Diary)

Response to local publicity generally gives the manager an idea if he might be on track. A "no response" also is meaningful in that the public sees no basic problem with what's being done. The nearby Forest Service Visitor Center, which is adjacent to the Rainbow trailhead, is ideally located to provide a read out on program effectiveness.

Promise Card Mapping System - The map dated 2/1/81 (Figure 5) shows historic use patterns and conflicts and will be used as the data base in the Rainbow area. This map shows use patterns prior to any attempt at natural management. The second map, dated 2/1/82 (Figure 6), shows applied natural techniques and anticipated new use patterns. Natural resource and social conflict zones are emphasized on the maps. A promise card system will be used to map the use patterns every two years to note long-term successes or failures.

Applied Techniques on Rainbow Demonstration Project

Summarized below is a list of specific NORM techniques which were applied to the Rainbow Demonstration Area:

1. A new trail was constructed for hikers and skiers only. It was symbol signed and used a log stile at one end to keep motorbikes out.

2. Suggested use symbol signs were used at all trail splits.

3. Existing hiker/skier trail was rerouted to a side hill to discourage motorbikes and snowmobiles.

4. Logs were scattered on hiker trail to discourage four-wheel drives. Narrow trail entrances were also used.

5. A narrow bridge not suitable for snowmobiles was constructed on the ski trail.

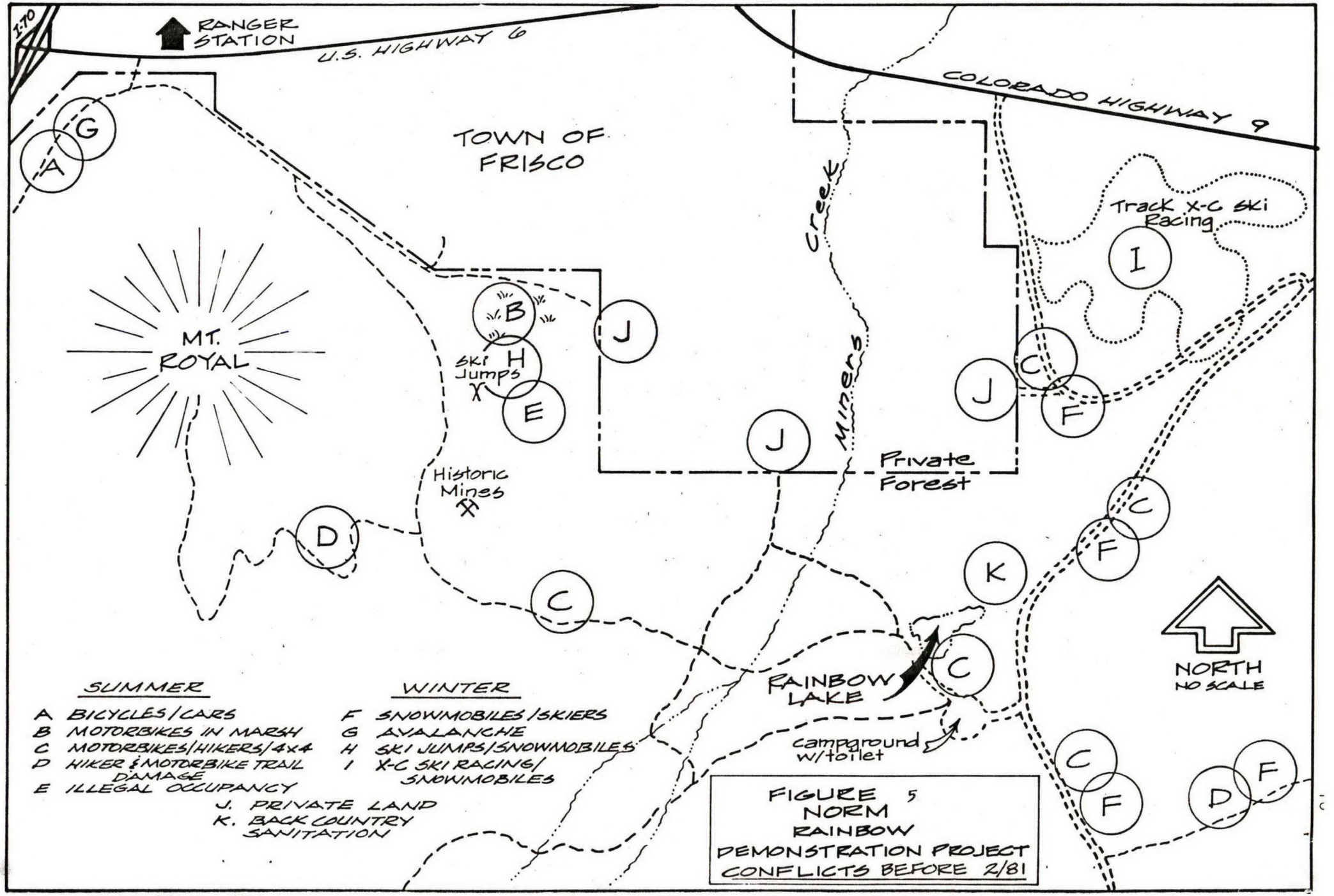


FIGURE 5
NORM
RAINBOW
DEMONSTRATION PROJECT
CONFLICTS BEFORE 2/81

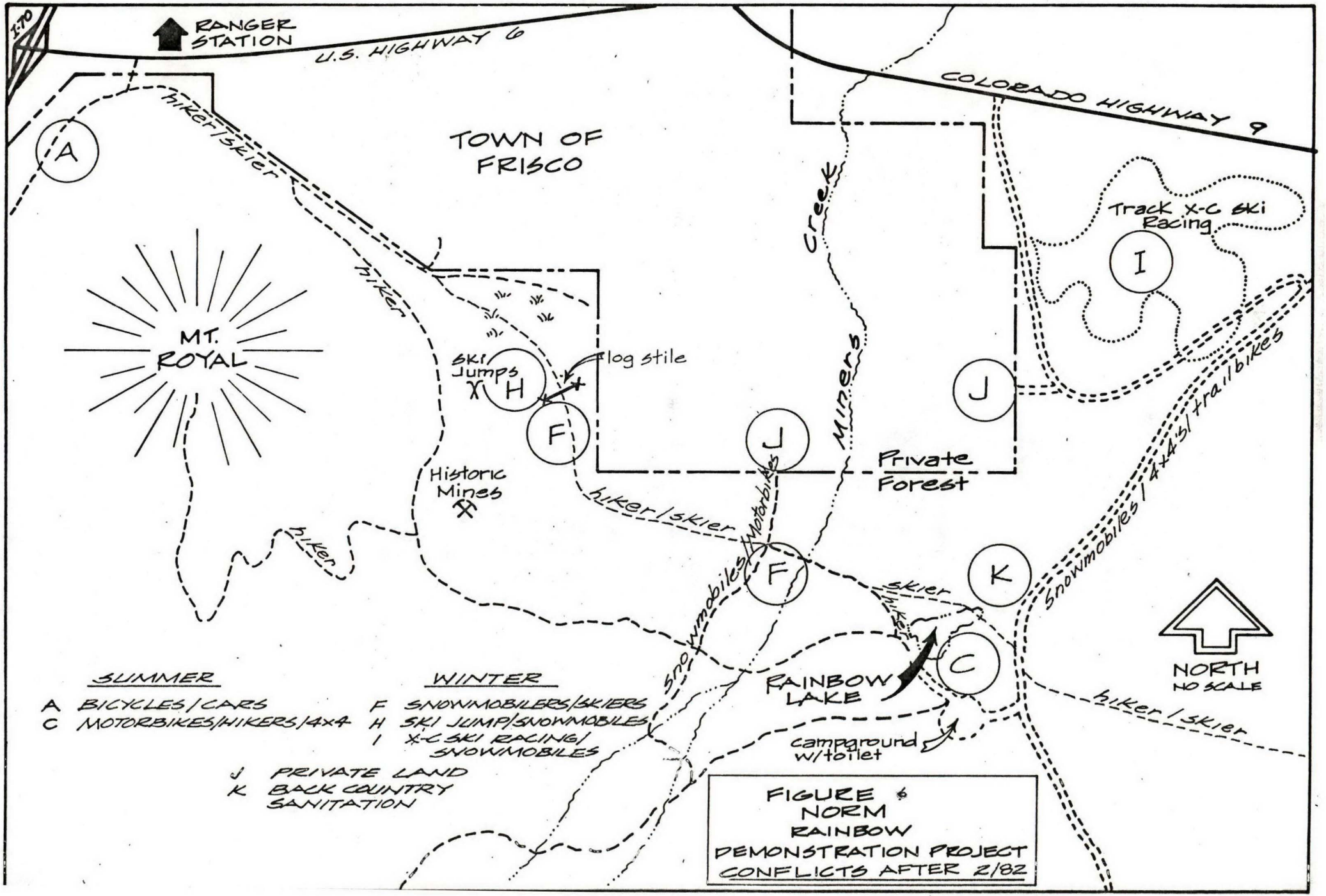


FIGURE 6
NORM
RAINBOW
DEMONSTRATION PROJECT
CONFLICTS AFTER 2/82

6. No trail marking was done on an avalanche prone trail.

7. All trails passed next to a toilet.

8. All routes were well marked near private land.

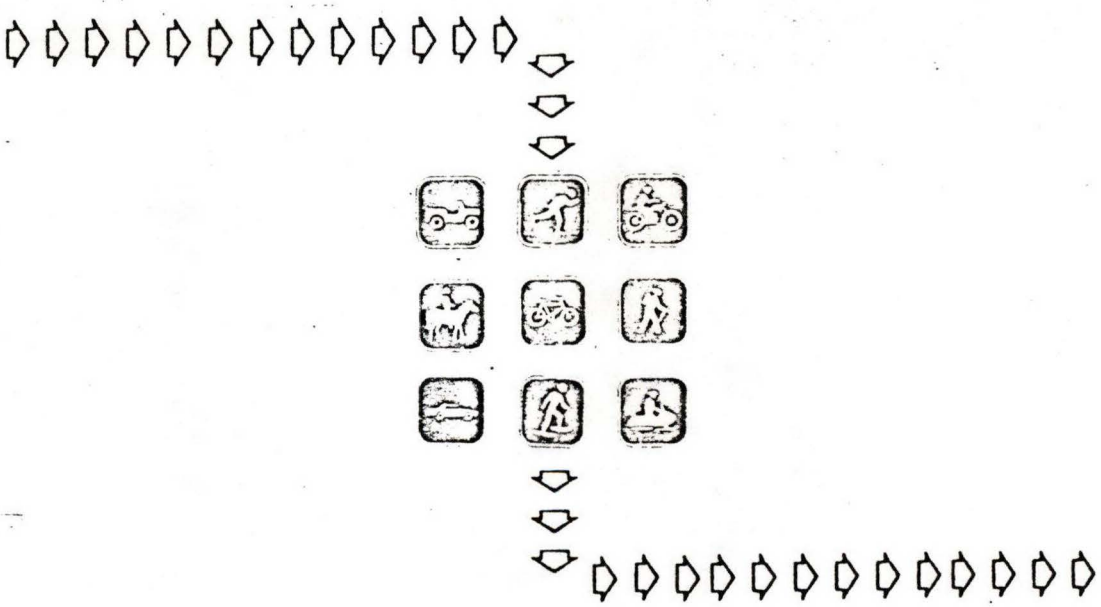
9. New trail routing was located near an illegal occupancy problem zone.

10. Large angled water bars were constructed in trails receiving erosion from motorbike use.

The mapping system only shows the numbers of different types of conflict and does not display the seriousness of one conflict over another. For purposes of our demonstration project, all of the conflicts have been rated as equal in impact.

Much has been learned from the earlier trial programs used in 1979 and 1980 on the Dillon and nearby Ranger Districts and from the Rainbow demonstration area. An analysis of each technique and its effectiveness will be made in the next section of this paper. Two years will also be the minimum amount of time needed to show program success. Is the area within limits of acceptable change? Will the natural resources not deteriorate any more than they are presently? Will opportunity for social separation be achieved? Are the criteria for the NORM concept being met?

Natural Opportunities for Recreation Movement



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CHAPTER IV

Ideally, it would be best to present charts, graphs, and use data on exactly how each natural technique worked. As stated earlier, we are dealing with a problem so massive that all the interdisciplinary teams conceivably available may still not be able to give us "last word" answers. The approach of this paper deals on a concept of activity management, results of which are many times intangible. Our methods are tangible, however, and what we have learned can easily be applied to similar situations throughout the national forest system.

The Rainbow demonstrated project has been in existence for less than six months. Through the combination of background knowledge gained from efforts tried elsewhere on the Dillon and nearby ranger districts and the specific application at the Rainbow area, some specific conclusions can be drawn. First, this chapter will analyze what has been seen so far at Rainbow and then look at some overall findings on the applicability of NORM.

The Rainbow Demonstration Project

Rainbow Analysis #1 - Facilities (routes) are needed for all user groups in the immediate area. The summer hiking trail was used primarily by hikers due to physical deterrents to trail bikers. The physical deterrent was a log stile in a relatively narrow opening near the trail start. The local motor biker found easy access to the lake area by using existing nearby road networks which were conveniently available. During winter, however, the snowmobilers found the hiker/skier route far more convenient to use than nearby road networks. The stile was not designed as a winter snowmobile barrier and an easy alternative route for snowmobilers was not established. In another area where the skier/hiker trail was on a sidehill immediately adjacent to an unplowed road system suitable for snowmobiles no conflict occurred. Suggested use signs confirmed the natural separation.

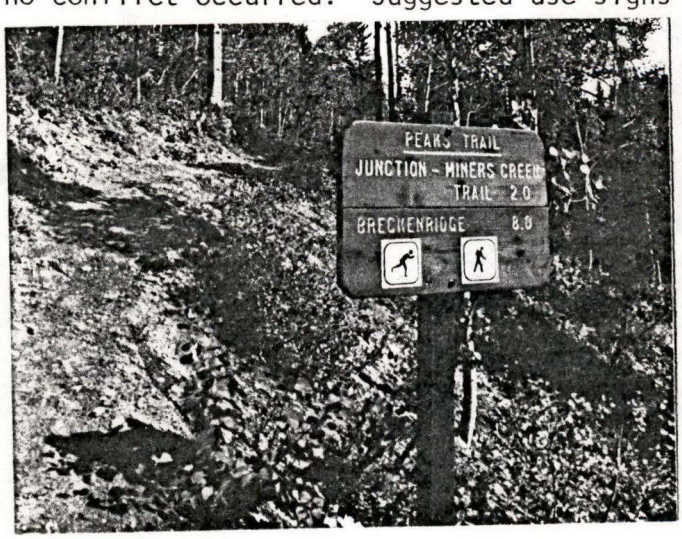


Figure 7. Suggested use signs and sidehill construction used to separate uses.

Rainbow Analysis #2 - A route good for snowmobilers in winter and motorbikes in summer was identified only for motorbikes due to lack of snowmobile signs. The motorized route crossed the non-motorized hiker/skier route. When winter came, the snowmobiles used both the motorized and non-motorized routes. If year round signs were used, better clarification might result.

Figure 8. Suggested use "summer" signs which also need suggested use "winter" signs.

Rainbow Analysis #3 - Four-wheel drive and hiker conflicts were easily eliminated by design, especially if a suitable alternative existed at the point of decision making. (Points of decision making are usually at trailheads or at splits in routes where alternative routes exist.)

Figure 9. Both signs are within sight of one another at the "point of decision".

Rainbow Analysis #4 - The hiker/skier route separation was somewhat confusing to the public, but only first time visitors. Respect for the route which is suggested is gained when the hiker who has followed the ski route finds that it is very wet and boggy in summer.

Rainbow Analysis #5 - The bicycle route can not be legally closed to cars, but peer pressure and facility design are helping to eliminate the conflict. Symbol signs are needed to reinforce the fact that cars and bicycles may be using the same route.

Rainbow Analysis #6 - Conflicts between snowmobiles/sledders and ski jumping/ski racing have not yet been addressed. Special signing at the jumping area and relocation of the ski racing area to the other side of a major plowed highway may be the best alternative.

Access across the plowed road by (local) snowmobiles would be inconvenient and lack of parking across the road would discourage the non-local snowmobiler from using the area. A nearby snowmobile parking area would be needed on the opposite side of the road from the ski racing track.

Rainbow Analysis #7 - Symbols signing on the avalanche exposed trail has not been done, but an alternate route was signed and marked at the point of decision. Users are using the safe marked route more than the avalanche-prone route, which has no signing.

Rainbow Analysis #8 - All routes pass within sight of an existing restroom. Use of the facility is low, but at least the option has been provided. Education in backcountry ethics will aid in creating an awareness of proper backcountry sanitation procedures.

Rainbow Analysis #9 - Well identified routes have minimized trespassing on private land and made certain forest areas less attractive to illegal occupancy. It is anticipated that by promoting recreational use in potential illegal occupancy areas, such as near resort towns, that the occupancy problem can be lessened. As use increases on the well-marked trail systems in the Rainbow area, illegal residences may find the area less attractive. Right-of-way acquisition may be a future alternative to alleviate the private land conflicts and provide an alternative snowmobile route.

Rainbow Analysis #10 - All routes tend to congregate at points of interest, such as the lake. Special parking areas are needed to minimize vehicle impact near the lake.

The before and after maps of the Rainbow demonstration project show that conflict zones have been reduced from twenty-one to only nine. The trends observed in the Rainbow demonstration project, and along with the background knowledge from other district situations, give the basis for the following nine overall findings.

Overall Finding #1 - The Tactical Approach

The discussions which accompanied the formulation of the County Trail Plan provided public involvement on the concept of designating certain drainages for certain uses. In essence, this could be interpreted as forest zoning; the zoning code being the Recreation Opportunity Spectrum. Words like zoning, controls, and designations aren't popular in management situations where the user is trying to escape the regulation of society. In a study Skiing Environments Preferred by Colorado Ski Tourers, it was concluded that skiers tended to favor informational types of management actions such as development maps. Direct restrictions were not wanted. (Rosenthal 1980) The off-road vehicle groups also have strongly expressed their fear of more legal closures.

Public involvement taught us that some careful psychology is needed here. Rather than words like zoning, controls, etc., the approach should use words like "best suited for". The land manager who is experienced and knowledgeable in recreation activities and settings on his District can fairly easily determine an area "best suited" for one or more activity types. In essence, he is setting up a zoning system, but the tact should be to emphasize the positive and set up a system based on areas "best suited" for activities.

Historically, this is easy for the manager to apply. Everybody knows (or at least thinks) that the local forest ranger has "the secret in" on the lake "best suited" for catching the big fish. The ranger's "historic reputation" can be used for all activities throughout the recreation spectrum. If it is approached in the correct atmosphere, acceptance by the public can be positive. This tact emphasizes the Forest Service "Host" program.

Overall Finding #2 - Suggested Use Signing

Initially, international symbol signs were used to suggest the activity best suited with no other message. Conflicts occurred when user groups other than designated by the symbol, used the area. Some users thought that the symbol meant that use was the exclusive use. Signs were revamped to include the words "suggested use" or "also open to snowmobiling". The trailhead guide was introduced with the following statement:

> These signs, which appear at trailheads, suggest the most suitable activity for the terrain and conditions of an area. They do not imply exclusions of other activities.

(See Appendix C - Trailhead Guide)

In addition, the words "Forest Service" were added to all the signs to give them more of a chance to use the Forest Service "historic reputation". As in our analogy of the Ranger who knows where the best fishing is, so also does the Ranger have the "in" on what activity is best suited for this area. "Suggested Use" was used to convey a less authoritarian approach.

Figure 10. Suggested use sign used on the Dillon Ranger District.

(See Appendix D - Sample of plasticized paper suggested use sign used on Dillon Ranger District)

Overall Finding #3 - Activity Distribution

If NORM is to work effectively to distribute users, reasonable travel distances must be available. Ideally each major division of a land unit (i.e., Ranger District, county, etc.) should have a full array of activities for the user to choose from. For example, the north half of a District needs at least one place for motorized activities and at least one place for non-motorized activities. Separation of these areas should be clear, such as opposite sides of roads or specific route marking. The average user will not drive the additional ten to twenty miles to the south side of the District for his activity.

When this distribution is impossible to provide in a land unit, information should be available which will help the visitor find the best suited spot on his or her next visit. In the meantine, expect the visitor to use the area he is currently visiting. In some cases, posting an area as suggested for "both" or "all" uses may be desireable due to a special feature or characteristic of the zone.

Transferring of use may take a few years to develop and recognize on the ground. An example of use distribution used on the Dillon Ranger District can be seen in the trailhead guide in Appendix C.

Overall Finding #4 - Year-Round Signing

Many users who visit the national forest in the summer return to the same spot in the winter. If the suggested use signing is posted year-round, it will greatly aid in making the transition of activities into the areas "best suited". In deep snow country, make sure the winter use is on the top part of the sign!

Overall Finding #5 - Facility Design and Amenities

Many amenities cost dollars and not always will a manager be able to build a new trail or other needed facility. In analyzing long-term capital investment programs, however, managers need to be aware of the cost benefits. Considering the benefits along with an applied NORM distribution system might better justify a cost expenditure in one area versus another.

The very best amenity (or facility) is recognizing the natural features of the land unit which relates to a particular activity. The use setting, matched with the proper activity gives the best recreation experience and ideally the least impact on the environment.

The sky is the limit in matching facility design to its intended use. Design must always consider the user and possible user conflicts. Often, this consideration is overlooked in the traditional construction of facilities for dispersed recreation. Just as handicapped use must be evaluated, other uses which may not be suited should also be addressed in design standards.

Listed below are some examples of natural design features and the effect which they can produce.

Natural Design Feature	Effect
Points of decision, such as splits in road or trails should not only display mileage or direction, but should show suggested use.	Allows an opportunity for all types of use separation.
Beginning $\frac{1}{4}$ mile of trail slightly wider than shoulder width.	Discourages horses, snowmobiles and trail bikes on hiker/skier route.

Natural Design Feature	Effect
Sidehill for beginning ¼ mile.	Discourages snowmobiles from cross-country ski route. Discourages four-wheel drives.
Corrals, hitching posts.	Identifies horse area.
Log step-overs and angled log waterbars.	Discourages motorbikes.
Beginning ¼ mile of trail 8 feet wide with constant turns.	Discourages four-wheel drive vehicles.
Sign the distance to the end of the road. Provide parking, turn arounds, or a point of interest at the end of the road.	Defines end of road and discourages further travel. Conveys the point that a destination has been met.
Parking lot size.	Controls use numbers.
Winter trailhead which has 5 - 10 miles of monotonous unplowed road prior to opening up in wide valley.	Suitable snowmobile route which is unattractive to cross-country skiers.
Easily identifiable division such as a plowed road or paved highway.	Can be used to separate use.
Trail markers for specific use such as blue diamonds for cross-country skiers; orange daimonds for snowmobiles; dot/dash blaze for all non-motorized use.	Clarifies separation of uses, especially when trails cross each other.

Overall Finding #6 - Peer Pressure and Acceptance

If a cross-country skier desires to use an area suggested for snowmobiling, he will have attuned his mind to the fact that there may well be snowmobiles in the area. By his own choice he has accepted the fact that snowmobiles may be using the area and that his recreation experience will not be upset by encountering them. On the other hand, a snowmobiler who decides to use an area best suited for cross-country skiing, will (hopefully) respect the skier by slowing down and going around him.

Peer pressure and general respect for others' right to use public land will also aid in this very delicate and potentially volatile situation. To date, nothing better has been known to work.

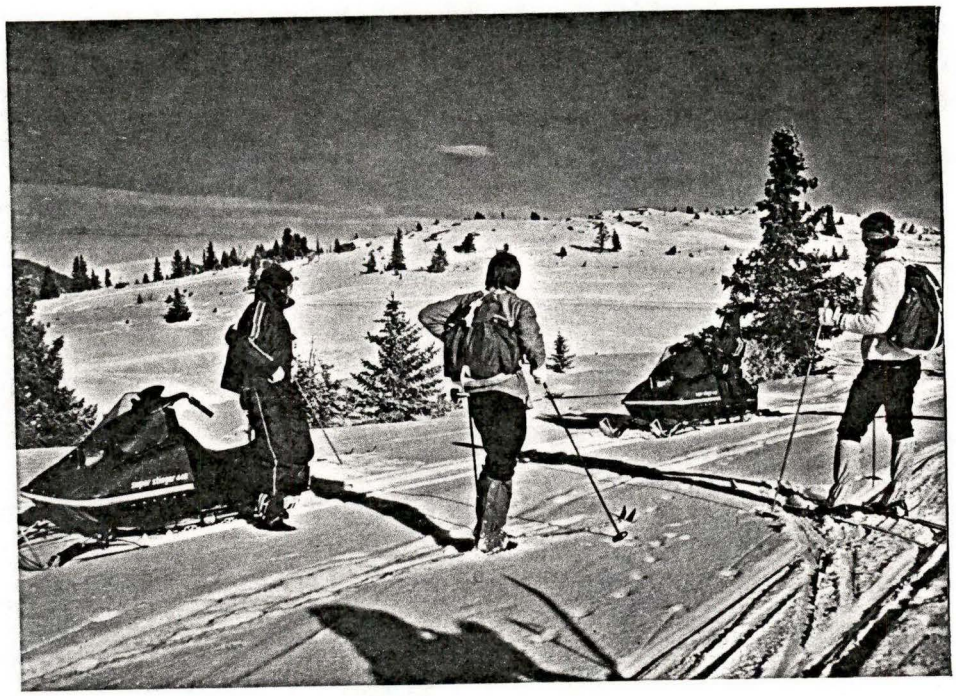


Figure 11. Snowmobiles and skiers in an area suggested for both uses.

Overall Finding #7 - Public Involvement

True public involvement has long been a difficult thing to achieve, especially in the management of national forest lands. The true user, middle-America or the silent majority, are rarely seen voicing their opinions at Forest Service formalized public involvement sessions. Natural Opportunities for Recreation Movement through the techniques introduced in this paper can easily respond to the public. Lengthy and confusing legal closures are not involved and signing or information sheets can be inexpensively adjusted or changed. Field response to a suggested use sign is fast and comes from the user groups affected.

Overall Finding #8 - Cost of Implementation

Through considerations in initial design, minor signing costs, proper public information distribution, and time, NORM can be initiated with negligible costs. Plastic/paper signs stapled on existing signs can suggest the best suited activity. Damaged symbol signs are easily replaced.

Rough sawn four-by-four wooden posts can be used where vandalism of regular signs is a problem. Symbol signs alone or with arrows effectively denote suggested use.

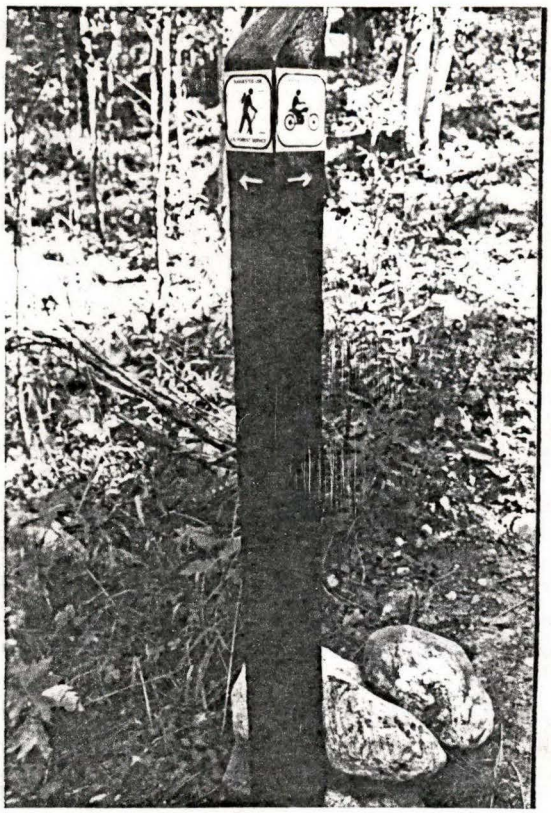


Figure 12. Stained rough sawn four-by-four post to display symbol signs.

Figure 13. Stapling suggested use signs on an existing sign.

The dollar return with respect to the biophysical and social environment is difficult to cost out just as is the recreation experience itself. Research on cost/benefits of recreation experiences will, hopefully, some day be better refined.

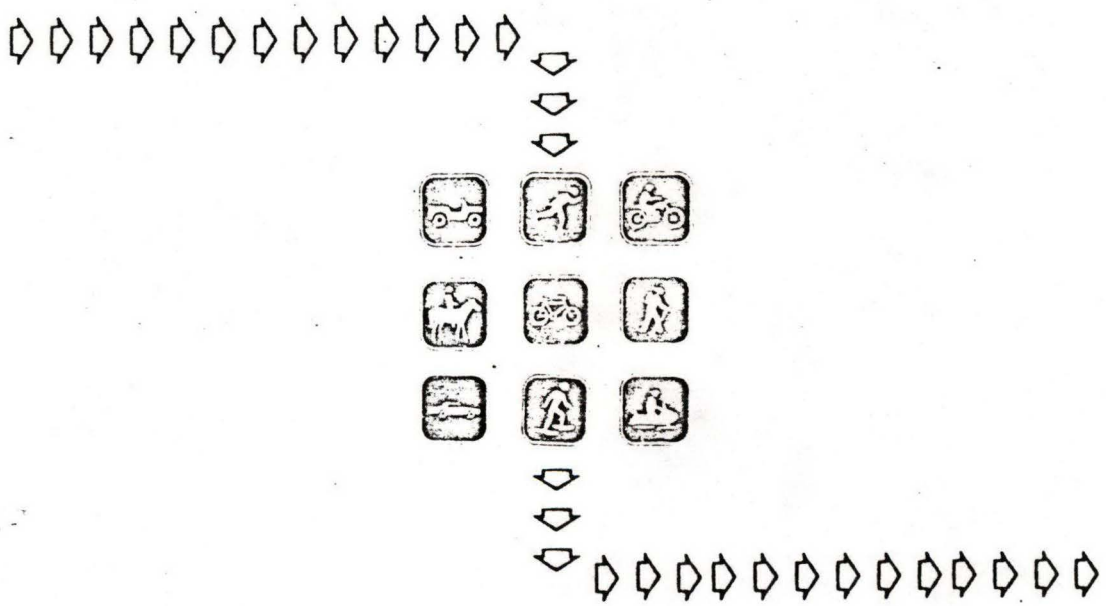
Overall Finding #9 - User Information

Oftentimes it becomes very difficult for the manager to respond effectively to the general public on management issues in the area of dispersed recreation. Relating the concept of NORM, however, readily gives a positive and understandable explanation as to what is being attempted.

All types of media are eager to have the "in" on where the forest ranger says is best for any particular activity. Efforts in explaining suggested use signing can clarify the point that it does not mean restrictive use. (See Appendix E - Media articles on the NORM concept)

Recreation Opportunity Guide should capitalize on the framework of NORM. The information sheets should correspond to the suggested use areas in the field. The information sheet on where to go horseback riding obviously shouldn't be the same area also being recommended for motorbiking.

Natural Opportunities for Recreation Movement



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CHAPTER V

Summary

Natural opportunities for recreation movement (NORM) is a management concept which uses subtle or light handed techniques as an aid to manage dispersed recreation use. Inconsistencies in the Recreation Opportunity setting as related to either the natural resource or the social setting can be addressed through the use of this concept. NORM uses low cost, simple and innovative methods as tools for achieving an acceptable level of land management. Year-round suggested use signing, special facility design and amenity recognition and development are some of the methods to achieve a better activity distribution. NORM is a viable alternative which can be used prior to going to more restrictive authoritarian controls.

Conclusions

Should resources be available, a controlled study over a long period of time is needed where the integration of the NORM concept can be statistically verified. Based upon the findings and within the limitations of this study, the following overall conclusions can be made.

Management direction involving specific objectives for land units must be determined prior to application of NORM on the ground. The completion of Forest plans will set the stage for the application of NORM. Setting standards for acceptable levels of change and professional recognition of long term consequences of impacts will help in implementing NORM.

Knowledge and understanding of the recreation users which are being managed is necessary. The characteristics of the various activities, both environmental and social, need to be understood if the NORM concept is to be successfully applied.

Standards for various activities are needed to guide the manager in establishing respective facilities. For example, Forest Service horse trail standards are well defined in the trail handbook but ski, snowmobile and motorbike trail standards are nonexistent.

Monitoring as to the success of an applied NORM concept is important. Adjustments will nearly always be necessary as the public adapts to a NORM program. Mapping of use conflicts both environmental and social as related to establishing levels of acceptable change may be the most practical way to evaluate the success of a NORM program.

Managers should institute a NORM program only after careful analysis of problems. Management overreaction could result in a visitor backlash to programs that might be needed later on. Visitor support will be best gained if the total picture is addressed in the application on a NORM technique.

What Can NORM Do for the Manager

The following summarizes what the NORM concept can do for the manager:

a. Provides a tool to react to resource needs and public pressures in dispersed recreation management.

b. Provides a low cost flexible system, attractive to the public as well as the manager.

c. Provides a method for implementation of the desired Recreation Opportunity Spectrum.

d. Provides a positive approach to land management.

National Forest lands are something special to the American public. A visit to the forest is special, an opportunity for freedom and spontaneity, a chance to get away from the daily routine of life. Restrictions and regulations obviously intrude on this experience. Overuse, unsanitary practices, litter, social conflict also intrude on this experience. The manager and researcher both observe and analyze the situation and see that something must be done. The forest visitor also sees the unacceptable change and wishes something to be done. If NORM can be used to successfully address the concerns of management and user in a desirable fashion, then it will be unnecessary to impose more heavy handed measures. NORM centers on subtle, light handed techniques versus authoritarian actions. NORM could be said to be "manipulative" measures than influence behavior by controlling the factors that influence decisions about where to go or how long to stay. Opposite of NORM are regulatory measures that directly control when, where, or how people may use an area. (Gilbert 1972)

Although both types of control are legitimate, their appropriateness must be determined in light of specific conditions. NORM is a management option, another tool, another way.

Recommendations

Gifford Pinchot said "There are many great interests on the National Forest which sometimes conflict a little. They must all be made to fit into one another so that the machine runs smoothly as a whole". Now in the 1980's, we have many, many great interests and they conflict more than just a little!

The Dillon Ranger District will continue to develop the NORM concept. A draft direction for the management of the District's dispersed areas has been completed. Suggested use signing has been recommended to the other Districts on the White River National Forest. Incorporation of NORM techniques into existing Forest Service handbooks and guides could offer that extra tool management might be looking for.

NORM is an exciting approach which the Forest Service can use in offering professional protection and management of natural resources to the benefit of the American public.

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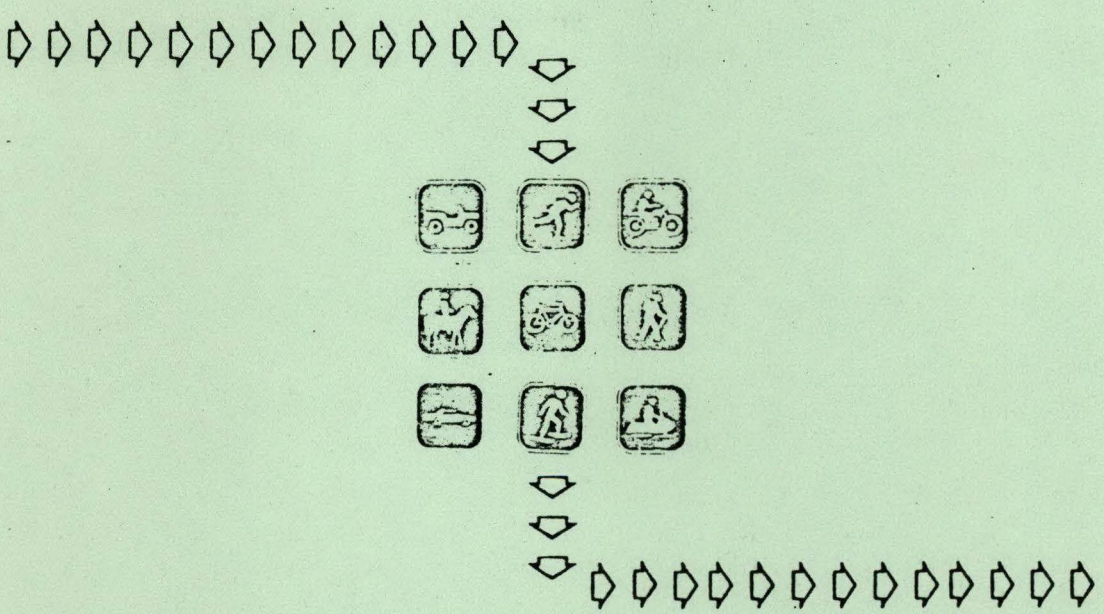
Natural Opportunities for Recreation Movement



APPENDIX

APPENDIX A

Typical Recreation Opportunity Guide

Used on the Dillon Ranger District

Forest Service
United States Department of Agriculture

Rocky Mountain Region

National Forest— Arapaho
Ranger District— Dillon

Date— 2/24/81

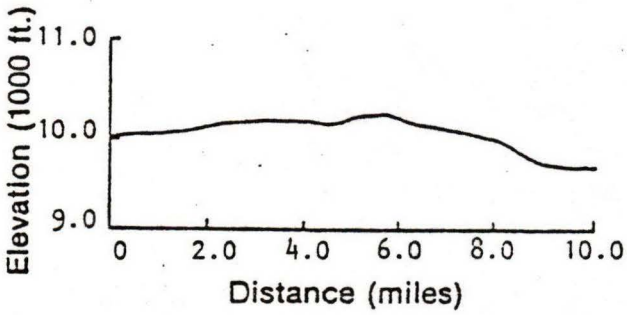
PEAKS TRAIL

Length: 10 mi. (16.1km.)

Recommended season:

Spring	Summer	Fall	Winter
			XXXXXXXX

Use: Low
Difficulty: Moderate
USGS Map(s): Breckenridge & Frisco



From Breckenridge to Frisco

Access #1 (Frisco) : Park in the Forest Service parking lot on West Main Street across from the Vail Pass-Tenmile Canyon National Recreation Trail (NRT) trailhead. From the NRT trailhead, take the second immediate left onto the natural gas pipeline right-of-way. This is where the Peaks Trail begins. Follow the blue diamonds to Breckenridge.

Access #2 (Breckenridge): Skiers are encouraged to take the free shuttle bus to the Peak 8 ski area to avoid parking problems. Travel west out of Breckenridge on Ski Hill Road to the upper parking lot at the base of Peak 8 or, if you are driving, continue beyond the parking lot ¼ mile on the Peak 7 Subdivision Road. Park off the side of the road near the trailhead sign.

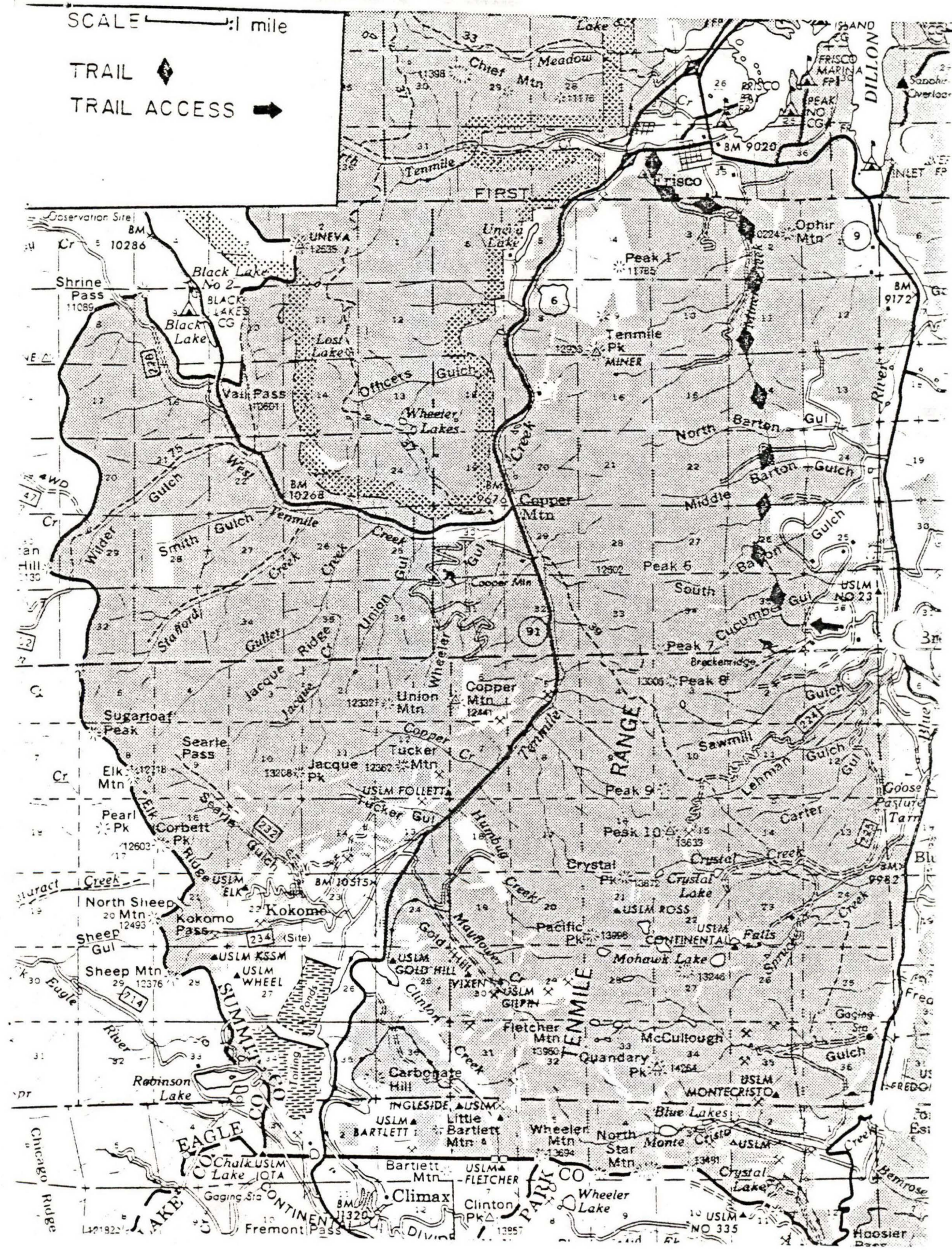
Attractions and Considerations:

Parking at the Peak 8 Ski Area parking lot is made possible by the Breckenridge Ski Corporation. Park in an orderly manner at the back section of the lot.

Narrative:

The Peaks Trail offers a relatively easy ski tour between the towns of Breckenridge and Frisco following the lower portions of the Tenmile Range. The trail is well marked and signed. It is suggested that you ski from Breckenridge to Frisco to take advantage of downhill sections.

Check the local bus schedule for a ride back to the town from where you started.


SCALE 1 mile
TRAIL
TRAIL ACCESS
Chief Mtn
Meadow Lake
Tenmile
FIRST
Frisco
FRISCO MARINA
PEAK NO CG
DILLON
BM 9020
Observation Site
BM 10286
UNEVA
Uncle Lake
Ophir Mtn
Peak 1
Shrine Pass
Black Lake No 2
BLACK LAKES CG
Black Lake
Lost Lake
Tenmile Pk
MINER
Officers Gulch
Vail Pass
Wheeler Lakes
North Barton Gul
Barton Gulch
Middle Barton Gulch
West Gulch
BM 10268
Copper Mtn
Wilder Gulch
Smith Gulch
Tenmile Creek
Peak 6
South Barton Gul
USLM NO 23
Stafford Gulch
Jacque Ridge
Union Gul
Wheeler Gul
Peak 7
Breckenridge
Peak 8
Union Mtn
Copper Mtn
Sugarloaf Peak
Searle Pass
Jacque Pk
Tucker Mtn
Copper Cr
Tenmile RANGE
Sawmill Gulch
Lehman Gul
Elk Mtn
USLM FOLLETT
Peak 9
Goose Pasture Tarn
Pearl Pk
Corbett Pk
Elk Ridge
Searle Gulch
Tucker Gul
Humbug Gulch
Peak 10
Carter Creek
Crystal Pk
Crystal Creek
Crystal Lake
BM 10515
USLM ELK
USLM ROSS
North Sheep Mtn
Kokomo
Kokomo Pass
Pacific Pk
USLM CONTINENTAL
Falls
Mohawk Lake
Sheep Gul
Maryellen Gold Hill
Sheep Mtn
USLM KSSM
USLM WHEEL
USLM GOLD HILL
VIXEN
USLM GILPIN
Clinton Creek
Fletcher Mtn
McCullough Gulch
Quandary Pk
Eagle River
SUMMIT CO
Tailing Ponds
Robinson Lake
Carbonate Hill
USLM MONTECRISTO
INGLESIDE
USLM BARTLETT
Little Bartlett Mtn
Blue Lakes
Wheeler Mtn
North Star Mtn
Monte Cristo
EAGLE CO
Chalk Lake
USLM IOTA
Bartlett Mtn
USLM FLETCHER
Climax
Clinton Pk
PARK CO
Wheeler Lake
Crystal Lake
Fremont Pass
USLM NO 335
Hoosier Pass
Chicago Ridge

Forest Service
United States
Department of
Agriculture

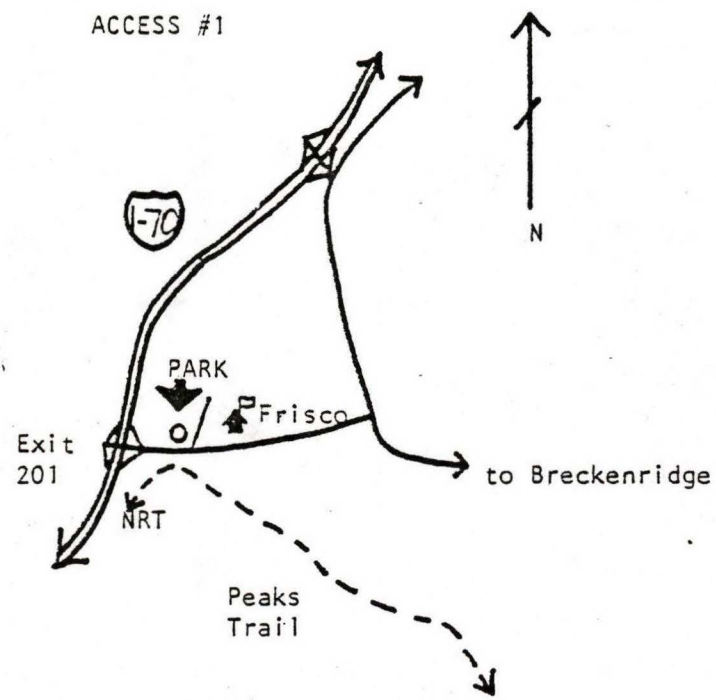
Rocky Mountain Region

National Forest—
Ranger District—

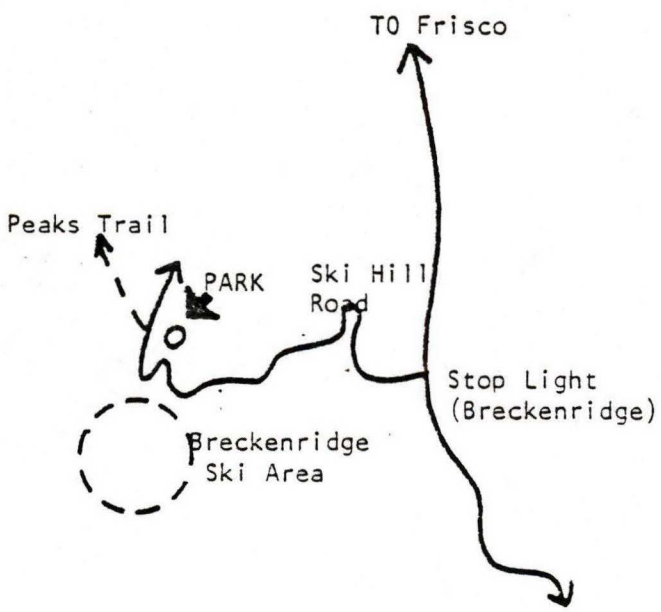
Date—3/24/81

ACCESS #1

MAP NOT TO SCALE



ACCESS #2



APPENDIX B

Observation Diary Form

MBSW BACKCOUNTRY FORM

OBSERVATIONS

Date:_____ Time:_____

Location (zone if known): _____

_____

(be specific--name of lake, trail, trail junction, nearby mountain)

Number of people in party by age group:

less than 15	16-20	21-35	36-50	over 50	TOTAL

Party composition by sex: # of males _____ # of females _____

Mode of travel: (circle) horse hike hike with pack animal

Do they appear to be day users? (circle) Yes No

Are they at their campsite? (circle) Yes No

Violations of Rules and Regulations (camping or campfires within 100 feet of streams and 200 feet of lakes; pack or saddle animals within 200 feet of shoreline; more than 10 pack or saddle stock or people in one party; dogs not confined):

General Observations (level of recreation use; weather; is the area impacted by man; is the party on a trail; etc.):

CASUAL CONVERSATION

Travel Route:_____

_____

Number of nights so far:_____ Additional planned:_____

Number of overnight campsites so far: _____ Additional planned:_____

Satisfying parts of trip:_____

_____

Dissatisfying parts of trip:_____

_____

Perceptions of:

. # of other people:_____

Level of man-caused degradation:_____

Management of area:_____

How satisfying the trip has been:_____

**What motives or satisfactions did they expect to fulfill on the trip? _____

_____

**Where or what part of the wilderness (backcountry) did they enjoy the most? (probe for name of lake, pass, trail, or mountain) _____

_____

**Why was it enjoyed the most? (probe) _____

_____

Recommendations for how the area should be managed?_____

_____

Other observations:

APPENDIX C

Winter Trail Head Guide

APPENDIX D

Plasticized Paper Suggested Use

Used on Dillon Ranger District

SUGGESTED USE
U.S. FOREST SERVICE

APPENDIX E

News Media Articles on the NORM Concept

NEW SIGNS
The Forest Service has designed new signs to mark trail heads, suggesting uses rather than restricting certain activities. The graphic signs should help alleviate some of the problems trail users with divergent interests are experiencing in the forest.

Spruce Creek trail nearly complete

If you have driven up Spruce Creek Road lately you may have noticed a new clearing at the forest boundary. The Forest Service trail crew is working on the final project of the new Spruce Creek trail south of Breckenridge. With the trail completed from the forest boundary to Mohawk Lake, what remains to be built is the trailhead parking area on Spruce Creek Road.

The sentiments of some people about the project were expressed by the hiker who said "This is my secret spot and now more people will come up here!" Actually the Forest Service work should reduce the problems in the area.

As use increases, there have been growing conflicts everywhere in the forest, traditional conflicts between muscle power and machines cannot be stopped by the Forest Service. The Forest Service is trying to minimize conflicts by providing opportunities for separation.

The new trail and trailhead will give people an alternative to walking on the four-wheel drive road. The trail parallels the creek for fishing and is very pleasant in itself. It should actually reduce the use in the Mohawk Lakes area, and separate users.

Summit County Journal
Breckenridge, Colorado
9/10/82

Snowmobiles and Cross Country Skiers: Do They Mix?

by Gary Sprung

A Workable Solution

Segregating different recreation into different parcels of land seems to minimize conflicts in the Dillon-summit County area.

Jim Gregg manages trails and winter recreation for the Forest Service there. His problem became intense because the area is along an interstate highway corridor which provides quick, easy access from Denver.

He established a system he calls NORM—Natural Opportunity for Recreation Movement—through which he tries to identify which lands are physically best for one or another type of recreation and also which lands are inappropriate for any recreation (such as avalanche-danger areas and wildlife winter range). Gregg said that in almost every case one can find some characteristics making an area more suitable for one type of recreation than another.

Summit County has hired a "trail coordinator" who works with the Forest Service and the skiers and snowmobilers to identify these areas. This coordinator also has assistance from volunteers who are students majoring in forestry or recreation management and need experience.

But Jim Gregg—and most Forest Service officials—as well as the snowmobilers, do not want any mandatory, legal segregations. The public land should be available to everybody's use, they think. Gregg said, "A legal closure is not enforceable, unless you stand out there with a gun."

Rather, areas are *suggested* as more appropriate using signs and maps. Recreation seekers "naturally" separate out. Or, a skier would travel into a snowmobilers' zone knowing the area's use, with his mind attuned to the idea of putting up with snowmobilers.

Gregg noted that skiers and snowmobilers often don't understand each other's feelings. If one snowmobile has created a track through five feet of new snow, a skier following would probably take to the track. Another snowmobiler would wonder, "If he is so into pristine, virgin land, why doesn't he break his own trail? And why can't he make the easy step aside when I pass?"

The skier might wonder, "He's got a high-powered machine; why can't he drive around me?" (not understanding that driving out of a track onto soft snow is difficult if one is not an expert snowmobiler).

Environmenta Impacts

Gregg discussed the relative environmental impacts.

He believes the snowmobiles have less harm on wildlife than the skiers. First, the notion that the loud machine will scare the animal and make it run away until exhausted has been discounted by scientific study.

Also, a prime characteristic of wildness is fear of humans. The animals don't recognize the machines as human, but do see the skiers that way. With repeated skier-animal contacts, the animals become accustomed to human presence, thus becoming tame.

A skier will usually try to get as close as possible to animals, and perhaps holler so the animal will raise its head for a photo. More often than not, the snowmobiler will move through the area without even seeing (or scaring) the animal.

Lobbying Strengths

In Summit County, Gregg estimates, the skier-snowmobiler ratio is about 7-3. But he hears much more from the snowmobilers because they are more organized. Their group orientation enables them to better influence agencies.

He suggests that snowmobilers are more family oriented and gregarious, while skiers are more independent and seeking solitude, and thus less organized. So he must actively seek out the skiers' participation in decision-making.

A Call for Discussion

Jim Gregg's problems are four years old, and he has provided some good management ideas. Gunnison County's are just beginning and ought to be understood before they become major.

The key is communication. Skiers and snowmobilers are invited to respond to this article by writing to *The Pilot* and to Shammy Somrak at the Forest Service (216 N. Colorado, Gunnison).

Also, cross-country skiers might consider attending the next meeting of the Gunnison Snowmobile Club.

The Pilot Review
Crested Butte, Colorado
1/9/81

APPENDIX F

Master Map Base for Use in Future

NORM Evaluation Mapping

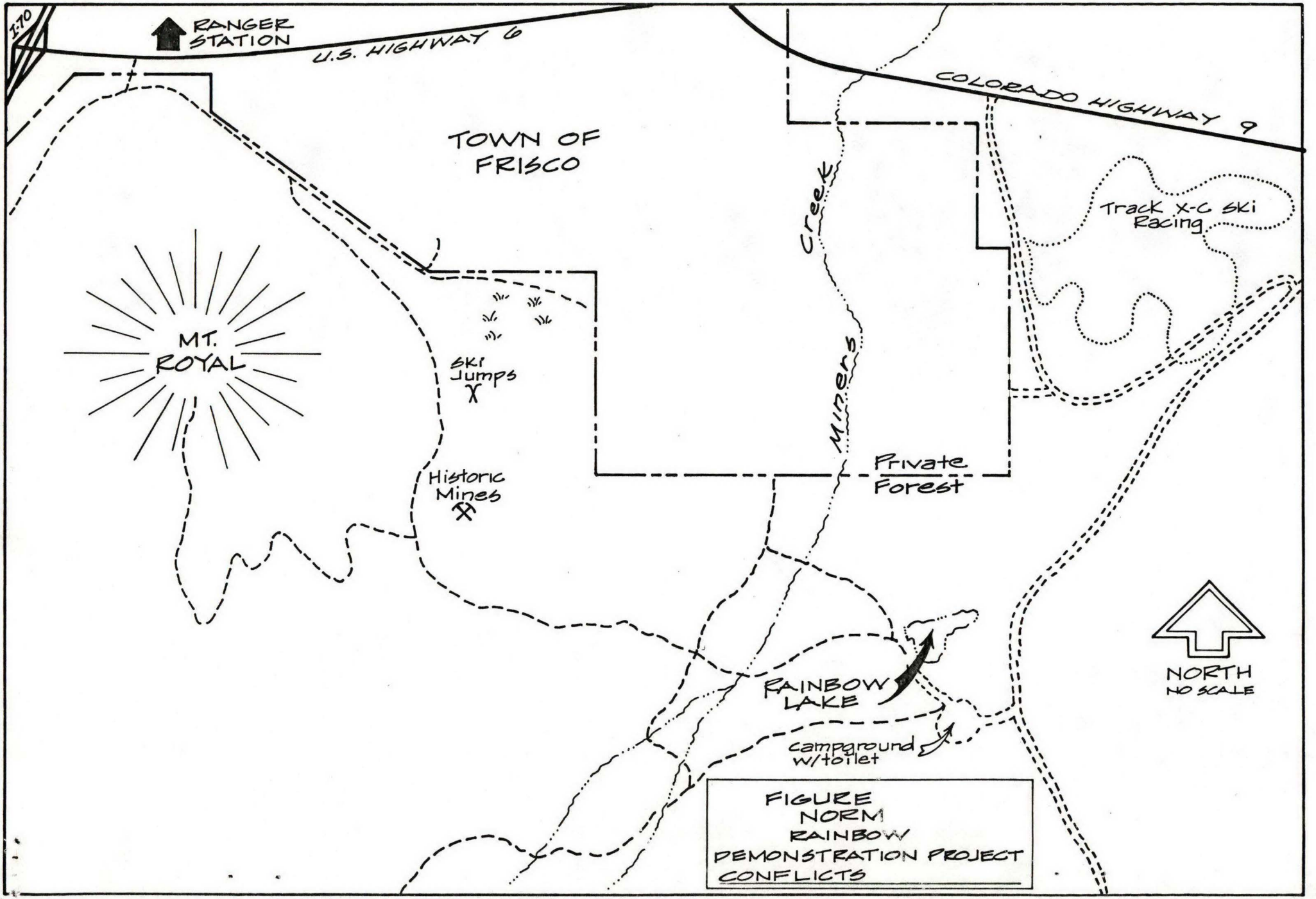


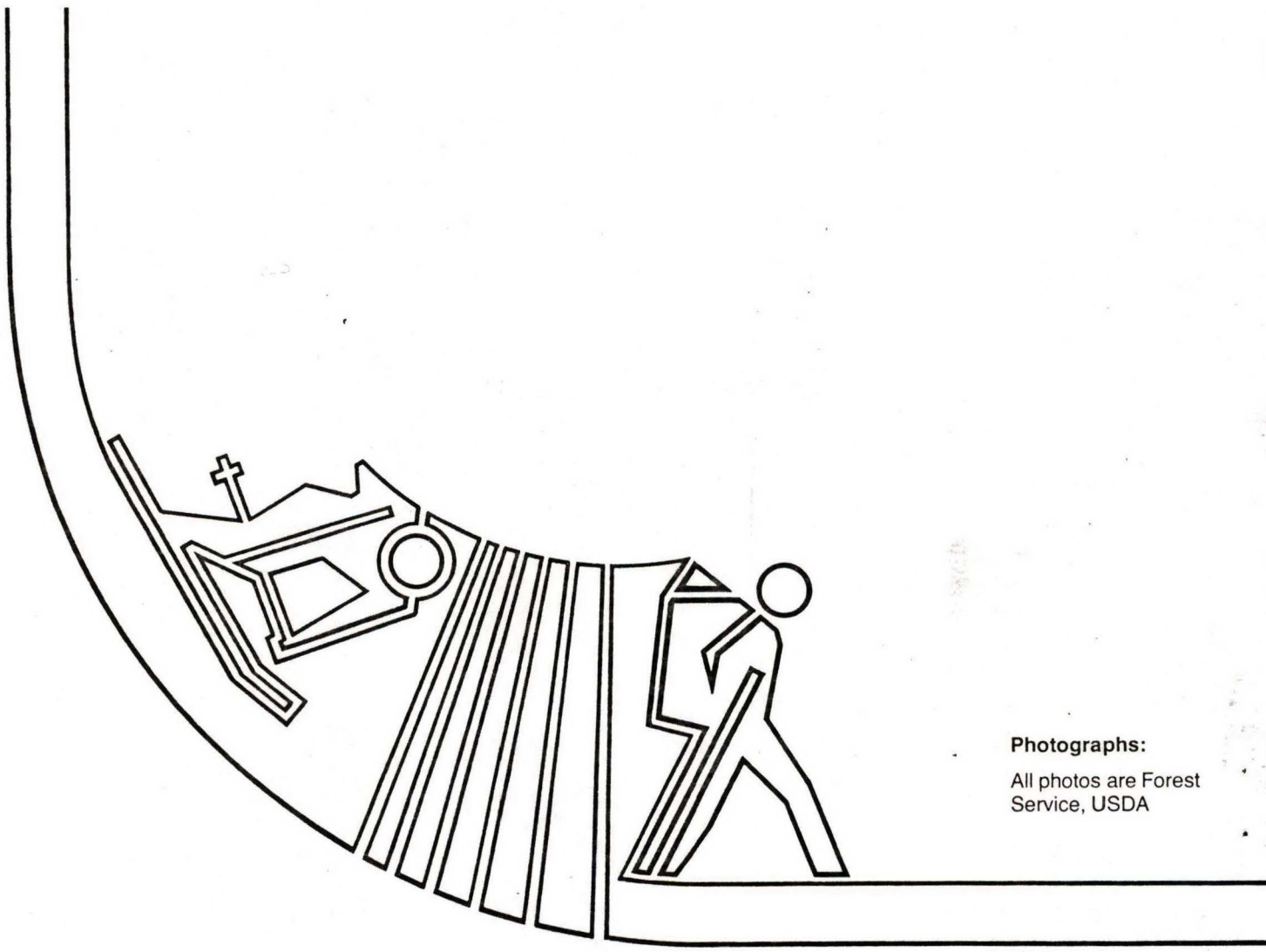
FIGURE
NORM
RAINBOW
DEMONSTRATION PROJECT
CONFLICTS

United States
Department of
Agriculture

**Forest
Service**

ROS

Users Guide



Photographs:

All photos are Forest Service, USDA

This handbook chapter serves as a guide for the recreation resource input to Land and Management Planning. It incorporates the Recreation Opportunity Spectrum as the basic framework for inventorying, planning and managing the recreation resource in accordance with the Forest and Rangeland Revewable Resources Planning Act of 1974 (RPA), as amended by the National Forest Management Act of 1976 (NFMA).